SolaH Use Cases

# Introduction

Use case analysis is a technique used to identify the requirements of a system (normally associated with software/process design) and the information used to both define processes used and classes (which are a collection of actors and processes) which will be used both in the [use case diagram](https://en.wikipedia.org/wiki/Use_case_diagram) and the overall [use case](https://en.wikipedia.org/wiki/Use_case) in the development or redesign of a software system or program.

In software and systems engineering, a use case is a list of actions or event steps typically defining the interactions between a role (known in the [Unified Modeling Language](https://en.wikipedia.org/wiki/Unified_Modeling_Language) (UML) as an [actor](https://en.wikipedia.org/wiki/Actor_(UML))) and a system to achieve a goal. The actor can be a human or other external system. In systems engineering, use cases are used at a higher level than within software engineering, often representing missions or stakeholder goals. The detailed requirements may then be captured in the [Systems Modeling Language](https://en.wikipedia.org/wiki/Systems_Modeling_Language) (SysML) or as contractual statements.

# Template

| Use Case 1:*Name* | |
| --- | --- |
| **Description** |  |
| **Actors** |  |
| **Requirements** |  |
| **Post-Conditions (*success*)** | *Expected results on success* |
| **Post-Conditions (*failure*)** | *Expected results on failure* |
| **Frequency of Use** |  |
| **Priority** |  |
| **Flow** |  |
| **Exceptions** |  |

# Use case 1 - View Data (Locally)

| Use Case 1: ***View Data* (Locally)** | |
| --- | --- |
| **Description** | User wants to view the water temperature and other statistics. |
| **Actors** | User (Client) |
| **Requirements** | Connection to local network (Wi-Fi) |
| **Post-Conditions (*success*)** | * User views the UI and can:   + Check water temperature, weather conditions, etc.   + Turn boiler On/Off. * Changes made by User (*if any*) are saved. |
| **Post-Conditions (*failure*)** | * User cannot connect to server due to:   + No connection to local network.   + Device connectivity problems. * The User is notified through a message. |
| **Frequency of Use** | Very often |
| **Priority** | High |
| **Flow** | 1. User enters the URL in the browser. 2. Upon a successful connection the UI is displayed. 3. User can view the data visualized in various forms (charts, values, etc.). 4. User can edit various settings concerning the device. 5. User exits by closing the browser tab. |
| **Exceptions** | * In ***Flow***, step ***4***:   + If there is a connectivity problem and the changes cannot be applied the User is notified accordingly. |

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# Use case 2 - View Data (Platform)

| Use Case 2: ***View Data* (Platform)** | |
| --- | --- |
| **Description** | User wants to login and use the web app. |
| **Actors** | User (Client) |
| **Requirements** | User is registered. |
| **Post-Conditions (*success*)** | * User views the UI and can:   + Check water temperature, etc.   + Turn boiler On/Off. * Changes made by User (*if any*) are saved. |
| **Post-Conditions (*failure*)** | * User cannot connect to server due to:   + No connection to the Internet.   + The server does not respond.   + Wrong *Username* or *Password*. |
| **Frequency of Use** | Often |
| **Priority** | High |
| **Flow** | 1. User enters the URL in the browser. 2. Upon a successful connection the UI is displayed. 3. The users enter their credentials and login. 4. The data is visualized in various forms. 5. Users can edit various settings. |
| **Exceptions** | * In ***Flow***, step ***3***:   + The credentials could be *incorrect*. * In ***Flow***, step ***5***:   + If there is a problem and *the changes cannot be applied* the User is notified accordingly. |

# TBA

* **Additional functionalities**:
  + *Create/modify profiles*
  + *Advanced settings*
  + …
* **Additional roles/users**:
  + *Larger installations*
  + *Multiple installations*
  + …